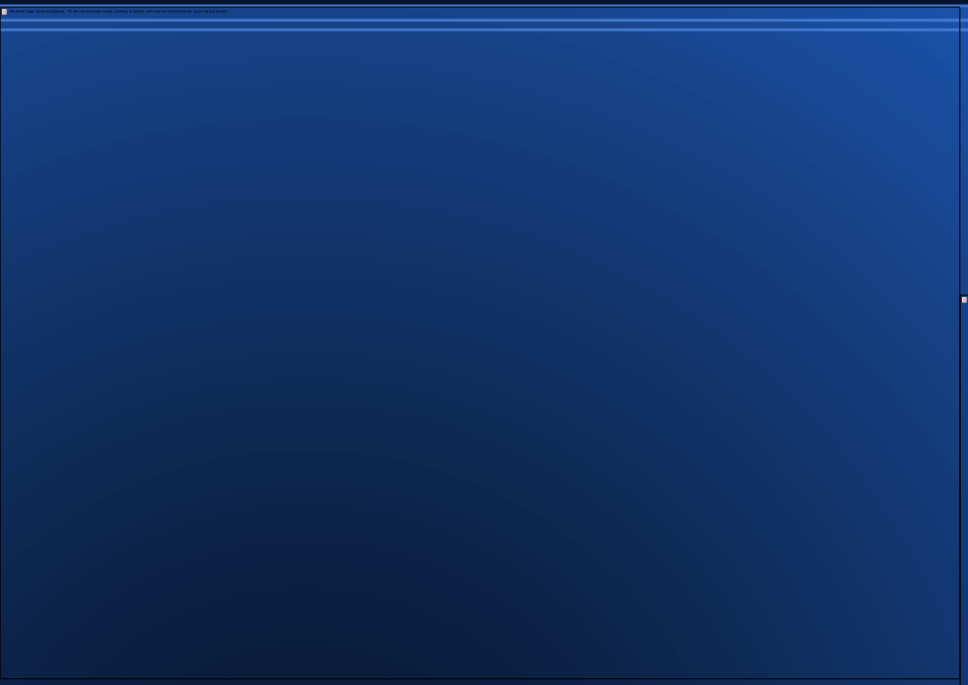
Operation Smooth Brews

Making Every Drop Count

About Euclid Beverage

- In operation for over 50 years distributing beer to Chicago and western suburbs
- 10,000 – 100,000 cases of beer shipped per day
- Over 200 varieties of beer
- 25-30 individual routes delivered to daily
- 130+ employees

Euclid Beverage Warehouse



230,000 sq. ft. warehouse facility

Located in

North Aurora

Statement of Problem

- Sponsor Objective:
  - Evaluate warehouse operation efficiency and supply a list of recommendations for improvement

Our Goals

- Audit Euclid Beverage's warehouse systems and equipment
  - Create process map
  - Examine Official vs. Actual processes
  - Determine changes we, the IPRO team, think they should implement to improve operations.

Team Structure

- Efficiency Improvement
  - Basel (Cycle Counting Process)
  - Soren (Road-Net System)
  - Kyle (Beer Order Entry Process)
  - June (On Board System)
  - Kiyomi (Hot Shots/Add-on Process)
  - Rob (Receiving/Pack List Process)
- Reduce Mistakes
  - Andrew (Picking Process)
  - Hee (Picking Process)
  - William (Replenishment Process)
  - Rich (Management Reporting)

Team Operation

- Problem-based structure
  - Group identifies problems
  - Distribute problems to team members
  - Creates increased individual accountability
  - Sub-teams form naturally as related solutions cause people to work together

Euclid Visits

- Meet with management
- Interview workers
- Observe work
- Test Hypothesis
- Get feedback
- Present results

Results

- Process maps
  - Delivered actual process maps based on our interviews and research
- Recommendations
  - 6 recommendations decided upon
- Performance Tracking Spreadsheet
  - Proof of concept for our database recommendation

Process Maps

Recommendations

- Greater flexibility in warehouse software
- Identify bottlenecks and opportunities to delegate
- Investigate effectiveness of voice technology in all tasks
- Product rationalization for small volume items
- Database
  - Consolidation of reports
  - Performance tracking and metrics
  - Visibility of errors and their costs
  - Prioritization of problems

Prototype of End of Day Database

DATE	Computer Mistake	Broken	No delivery	Overage	Mispick	No One Home	Short Picks	Overpick	No Money	Total
2-Mar	0	0	0	0	0	0	0	0	0	0
3-Mar	0	0	0	0	0	0	0	0	0	0
4-Mar	0	0	0	0	0	0	0	0	0	0
5-Mar	0	0	0	0	0	0	0	0	0	0
6-Mar	0	0	0	0	0	0	0	0	0	0
10-Mar	0	0	0	0	0	0	0	0	0	0
11-Mar	0	0	0	0	0	0	0	0	0	0
12-Mar	0	0	0	0	0	0	0	0	0	0
13-Mar	0	0	0	0	0	0	0	0	0	0
16-Mar	0	0	0	0	0	0	0	0	0	0
17-Mar	0	0	0	0	0	0	0	0	0	0
18-Mar	0	0	0	0	0	0	0	0	0	0
19-Mar	0	0	0	0	0	0	0	0	0	0
20-Mar	0	0	0	0	0	0	0	0	0	0
23-Mar	0	0	0	0	0	0	0	0	0	0
24-Mar	0	0	0	0	0	0	0	0	0	0
25-Mar	0	0	0	0	0	0	0	0	0	0
26-Mar	0	0	0	0	0	0	0	0	0	0
27-Mar	0	0	0	0	0	0	0	0	0	0
30-Mar	0	0	0	0	0	0	0	0	0	0
31-Mar	0	0	0	0	0	0	0	0	0	0
INCIDENT TOTAL	0	0	0	0	0	0	0	0	0	0
MINUTES PER INCIDENT	7	18	27	26	7	27	24	7	27	
MINUTE TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL LABOR COST ($34)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
TOTAL GOODWILL ($5)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
TOTAL INVENTORY ($11)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
GRAND TOTAL	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Obstacles

- Difficulty of site visits
  - Distance
  - Three shifts – 24 hour operation
  - Time overlap with other classes
  - Solution: sub-teams visits
- Lack of information and experience
  - Solution: Get out there and see it
- Broad scope of problem
  - Solution: Break down task into smaller pieces and divide among team members
- Confidentiality
  - Solution: Work with client to develop rules for information handling, especially for this presentation

What we Learned

- What did we learn which was not specific to the project?
- Initial assumptions must be tested because they're probably wrong
- Verify everything: get multiple sources
- There is no one right answer, but there are many wrong answers, so speak up when something looks wrong.

Questions?